

Docket No. 500.44691X00  
Serial No. 10/522,772  
Office Action dated July 27, 2006

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AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior listings, and all prior versions, of claims in the application.

LISTING OF CLAIMS:

1. (Currently Amended) A transreflective type liquid crystal display performing ~~transmission type display and reflection type display and comprising a liquid crystal layer squeezed between a pair of substrates; a transmission display portion and a reflection display portion, said display portion comprising:~~

~~a plurality of pixels formed on one of said substrates in an area surrounded on a substrate by a plurality of gate electrodes and a plurality of source electrodes arranged perpendicularly orthogonal to said gate electrodes;~~

~~a switching element thin-film transistor arranged in each pixel and disposed near at an intersection between each gate electrode and each source electrode; and~~

~~a pixel electrode connected to said switching element thin-film transistor, wherein said pixel electrode comprises a transparent conductive layer and conductive members having a light reflection function and electrically connected to said transparent conductive layer, and said conductive members are disposed on the surface of said transparent and conductive layer randomly and dispersively.~~
2. (Original) A transreflective type liquid crystal display according to claim 1, wherein ~~said conductive members are directly disposed on said transparent conductive layer.~~

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3. (Currently Amended) A transflective type liquid crystal display according to claim 1-~~or 2~~, wherein in each pixel area, said reflection display portion is an area where said conductive members a reflection display area and the other area is a transmission display area are disposed, and said transmission portion is an area other than said reflection display portion.

4. (Currently Amended) A transflective type liquid crystal display according to claim 21, wherein said conductive members comprise a plurality of convex or concave members;  
and each of said convex or concave members has a continuously changing slope surface.

5. (Currently Amended) A transflective type liquid crystal display according to claim 1, wherein a pattern where said conductive members are arranged on the surface of said transparent conductive layer is such that a plurality of conductive members formed of convex or concave members are disposed dispersively, each of said conductive members having generally a circle, polygon, bar or string shape-4, wherein said convex or concave members has each a continuously changing slope surface.

6. (Currently Amended) A transflective type liquid crystal display according to claim 5, wherein a pattern of said circles, polygons, bars and strings is a phase separation pattern realized by high polymer block copolymer-4, wherein each of said convex or concave members has generally a circle, polygon, bar or string shape.

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7. (Currently Amended) A transreflective type liquid crystal display according to claim 1, wherein said conductive members are dispersively disposed on all area of a specified area of said transparent conductive layer 6, wherein a pattern of said circles, polygons, bars and strings is a phase separation pattern realized by high polymer block copolymer or the like.

8. (Currently Amended) A transreflective type liquid crystal display according to claim 1, wherein a common electrode is disposed on the other of said pair of substrates 2, wherein said conductive members are made of conductive material mainly consisting of fine particles of silver, gold or the like.

9. (Original) A transreflective type liquid crystal display performing transmission type display and reflection type display in each pixel, wherein a pixel electrode disposed in each pixel is constituted of a transparent conductive layer and conductive members having a light reflection function and electrically connected to said transparent conductive layer.

10. (Original) A transreflective type liquid crystal display according to claim 9, wherein said conductive members are directly disposed on said transparent conductive layer.

11. (Original) A transreflective type liquid crystal display according to claim 9 or 10, wherein the transreflective type liquid crystal display has a liquid crystal layer squeezed between a pair of substrates at least one of which is a transparent substrate, and wherein: said transparent conductive layer is of a flat plate shape; and

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a common electrode corresponding to said pixel electrodes is disposed on the substrate different from the substrate on which said conductive layer is disposed.

12. (Original) A transreflective type liquid crystal display according to claim 10, wherein said conductive members comprise a plurality of convex or concave members.

13. (Original) A transreflective type liquid crystal display according to claim 12, wherein said convex or concave members has each a continuously changing slope surface.

14. (Currently Amended) A transreflective type liquid crystal display according to claim 10, wherein said convex or concave members are made of conductive material mainly consisting of fine particles of silver, or gold or the like having a nano order diameter.

15. (Original) A transreflective type liquid crystal display performing transmission type display and reflection type display in each pixel, wherein a pixel electrode disposed in each pixel comprises a flat plate type transparent conductive layer and conductive members having a light reflection function.

16. (Original) A transreflective type liquid crystal display according to claim 15, wherein said conductive members are directly disposed on said transparent conductive layer.

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17. (Original) A transreflective type liquid crystal display according to claim 16, wherein the transreflective type liquid crystal display has a liquid crystal layer squeezed between a pair of substrates at least one of which is a transparent substrate, and wherein a common electrode corresponding to said pixel electrodes is disposed on the substrate different from the substrate on which said conductive layer is disposed.

18. (Original) A transreflective type liquid crystal display according to claim 16, wherein said conductive members comprise a plurality of convex or concave members.

19. (Original) A transreflective type liquid crystal display according to claim 18, wherein each of said convex or concave members has a continuously changing slope surface.

20. (Currently Amended) A transreflective type liquid crystal display according to claim 16, wherein said convex or concave members are made of conductive material mainly consisting of fine particles of silver-or gold or the like having a nano order diameter.

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LISTING OF CLAIMS:

1. (Currently Amended) A transreflective type liquid crystal display performing transmission type display and reflection type display and comprising a liquid crystal layer squeezed between a pair of substrates; a transmission display portion and a reflection display portion, said display portion comprising:

a plurality of pixels formed on one of said substrates in an area surrounded on a substrate by a plurality of gate electrodes and a plurality of source electrodes arranged perpendicularly orthogonal to said gate electrodes;

a switching element thin-film transistor arranged in each pixel and disposed near at an intersection between each gate electrode and each source electrode; and

a pixel electrode connected to said switching element thin-film transistor, wherein said pixel electrode comprises a transparent conductive layer and conductive members having a light reflection function and electrically connected to said transparent conductive layer, and said conductive members are disposed on the surface of said transparent and conductive layer randomly and dispersively.
2. (Original) A transreflective type liquid crystal display according to claim 1, wherein said conductive members are directly disposed on said transparent conductive layer.

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3. (Currently Amended) A transreflective type liquid crystal display according to claim 1-~~or~~-2, wherein in each pixel area, said reflection display portion is an area where said conductive members a reflection display area and the other area is a transmission display area are disposed, and said transmission portion is an area other than said reflection display portion.

4. (Currently Amended) A transreflective type liquid crystal display according to claim 21, wherein said conductive members comprise a plurality of convex or concave members;  
and each of said convex or concave members has a continuously changing slope surface.

5. (Currently Amended) A transreflective type liquid crystal display according to claim 1, wherein a pattern where said conductive members are arranged on the surface of said transparent conductive layer is such that a plurality of conductive members formed of convex or concave members are disposed dispersively, each of said conductive members having generally a circle, polygon, bar or string shape 4, wherein said convex or concave members has each a continuously changing slope surface.

6. (Currently Amended) A transreflective type liquid crystal display according to claim 5, wherein a pattern of said circles, polygons, bars and strings is a phase separation pattern realized by high polymer block copolymer 4, wherein each of said convex or concave members has generally a circle, polygon, bar or string shape.

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7. (Currently Amended) A transreflective type liquid crystal display according to claim 1, wherein said conductive members are dispersively disposed on all area of a specified area of said transparent conductive layer 6, wherein a pattern of said circles, polygons, bars and strings is a phase separation pattern realized by high polymer block copolymer or the like.

8. (Currently Amended) A transreflective type liquid crystal display according to claim 1, wherein a common electrode is disposed on the other of said pair of substrates 2, wherein said conductive members are made of conductive material mainly consisting of fine particles of silver, gold or the like.

9. (Original) A transreflective type liquid crystal display performing transmission type display and reflection type display in each pixel, wherein a pixel electrode disposed in each pixel is constituted of a transparent conductive layer and conductive members having a light reflection function and electrically connected to said transparent conductive layer.

10. (Original) A transreflective type liquid crystal display according to claim 9, wherein said conductive members are directly disposed on said transparent conductive layer.

11. (Original) A transreflective type liquid crystal display according to claim 9 or 10, wherein the transreflective type liquid crystal display has a liquid crystal layer squeezed between a pair of substrates at least one of which is a transparent substrate, and wherein: said transparent conductive layer is of a flat plate shape; and

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a common electrode corresponding to said pixel electrodes is disposed on the substrate different from the substrate on which said conductive layer is disposed.

12. (Original) A transreflective type liquid crystal display according to claim 10, wherein said conductive members comprise a plurality of convex or concave members.

13. (Original) A transreflective type liquid crystal display according to claim 12, wherein said convex or concave members has each a continuously changing slope surface.

14. (Currently Amended) A transreflective type liquid crystal display according to claim 10, wherein said convex or concave members are made of conductive material mainly consisting of fine particles of silver-or gold or the like-having a nano order diameter.

15. (Original) A transreflective type liquid crystal display performing transmission type display and reflection type display in each pixel, wherein a pixel electrode disposed in each pixel comprises a flat plate type transparent conductive layer and conductive members having a light reflection function.

16. (Original) A transreflective type liquid crystal display according to claim 15, wherein said conductive members are directly disposed on said transparent conductive layer.

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17. (Original) A transreflective type liquid crystal display according to claim 16, wherein the transreflective type liquid crystal display has a liquid crystal layer squeezed between a pair of substrates at least one of which is a transparent substrate, and wherein a common electrode corresponding to said pixel electrodes is disposed on the substrate different from the substrate on which said conductive layer is disposed.

18. (Original) A transreflective type liquid crystal display according to claim 16, wherein said conductive members comprise a plurality of convex or concave members.

19. (Original) A transreflective type liquid crystal display according to claim 18, wherein each of said convex or concave members has a continuously changing slope surface.

20. (Currently Amended) A transreflective type liquid crystal display according to claim 16, wherein said convex or concave members are made of conductive material mainly consisting of fine particles of silver, ~~or gold or the like having a nano order diameter.~~